

WILD TIMES

KIDS MAGAZINE

WINTER 2020



INSIDE:

**DISCOVER HOW BIOLOGISTS
STUDY BATS IN WINTER**

WHAT IS A WHMA?

NEED A WINTER PROJECT?

BUILD A BAT HOUSE!

ACTIVITIES | LESSONS | INFORMATION | FUN

HABITAT CONNECTION

All animals need good habitat to survive. Habitat is the food, water, shelter and space that wildlife use. But have you ever thought about what happens to habitat when winter comes? Snow covers food like grass, plants die and water where animals drink freezes. This can be very challenging for wildlife. Thankfully, most animals are good at dealing with the harsh Wyoming winter weather. They find shelter to protect themselves from the wind, and some animals even change what they eat. For example, deer and elk might snack on twigs and bark exposed above the snow. Some animals, like bats, resort to hibernating, which is what we call it when animals' bodies slow down, their body temperature decreases and they spend the winter hiding in a cave or sheltered spot without leaving to eat or drink. Keep reading this issue to find out more about why we study bats in the winter and how the Wyoming Game and Fish Department helps animals like deer and elk survive the wintertime.





Measurements being taken on a bat



Non-game biologist Laura Beard and a technician attaching a transmitter to a bat

Beeping Bats

Nongame Biologist Laura Beard and her crew began trapping bats in the Lander area in the fall of 2018 to find out where bats are spending their time in the winter. Most species of bats in Wyoming stay in the state during the winter, hibernating in places that provide a cool, humid and stable environment. However, biologists rarely find many bats during cave and mine surveys in the winter. To help solve this mystery, bi-

ologists are putting transmitters on bats to follow them to their winter roosts to better understand where Wyoming's bats are hibernating. Transmitters are like a little piece of jewelry that sends out a radio signal. The biologists can tune into that radio signal on a receiver and if the bat is nearby, the biologist will hear a beeping noise. The beeping noise will get louder the closer the biologist gets to the bat, which helps the

biologist locate the bat just like they are playing a game of Marco-Polo.

The crew also has deployed bat detectors at several locations in the southern Wind River Range. The equipment only records bats' echolocation calls at night and does not record other sounds like human voices. If you spend time in the backcountry you may see one of these recording devices in a green plastic ammo can with a microphone on an aluminum pole.

Understanding where bats spend the winter and the environmental conditions in their winter roosts is critical to monitoring white-nose syndrome. White-nose syndrome is a fungal disease that kills hibernating bats by causing them to burn through their energy reserves too quickly, dying of either starvation or exposure when they leave their hibernation spot during winter to search for food. With the recent detection of the fungus that causes white-nose syndrome in Goshen County in May of 2018, locating, monitoring, and potentially protecting these wintering areas will be important to managing and conserving Wyoming's bats.

WILDLIFE PROFILES



Big Brown Bat (*Eptesicus fuscus*)

Range: Big brown bats are found throughout North America, the Caribbean and the northern portion of South America.

Size: Big brown bats weigh 15–26 grams and are about 4.5- to 5-inches long, which is about the size of a mouse.

Habitat: The big brown bat is considered a “generalist,” which means it can adapt to almost any habitat, including deserts, meadows, cities, forests and mountains. They will roost (sleep) almost anywhere, including mines, caves, tunnels, buildings, bat boxes, spaces in trees, wood piles and rock crevices.

Young: Their breeding season is in the fall, shortly before they go into hibernation. After hibernation ends in the spring, females gather in groups called maternity colonies before

giving birth to young. Big brown bats usually have one or two pups each spring. The pups are born blind, have no fur and completely depend on their mother. They grow quickly and are able to fly within four to six weeks.

Predators: The big brown bat has few natural predators. American kestrels, owls, long-tailed weasels and raccoons will eat a big brown bat if they have the opportunity.

Food: Big brown bats are insectivores, which means they eat many kinds of insects including flies, stoneflies, mayflies, caddisflies and cockroaches. Their favorite things to eat are beetles.

Did you know? Big brown bats are reported to be one of the fastest bats, reaching speeds of up to 40 mph.

WILDLIFE PROFILES



Hoary Bat (*Lasiurus cinereus*)

Range: Hoary bats live throughout most of North America and much of South America and can be found throughout Wyoming, especially in areas with lots of trees.

Size: Hoary bats are about 5-inches long and weigh 25-30 grams, which is about the size of a large mouse.

Habitat: Unlike a number of bat species, hoary bats roost (sleep) among the leaves or needles of trees, typically on the edge of a clearing.

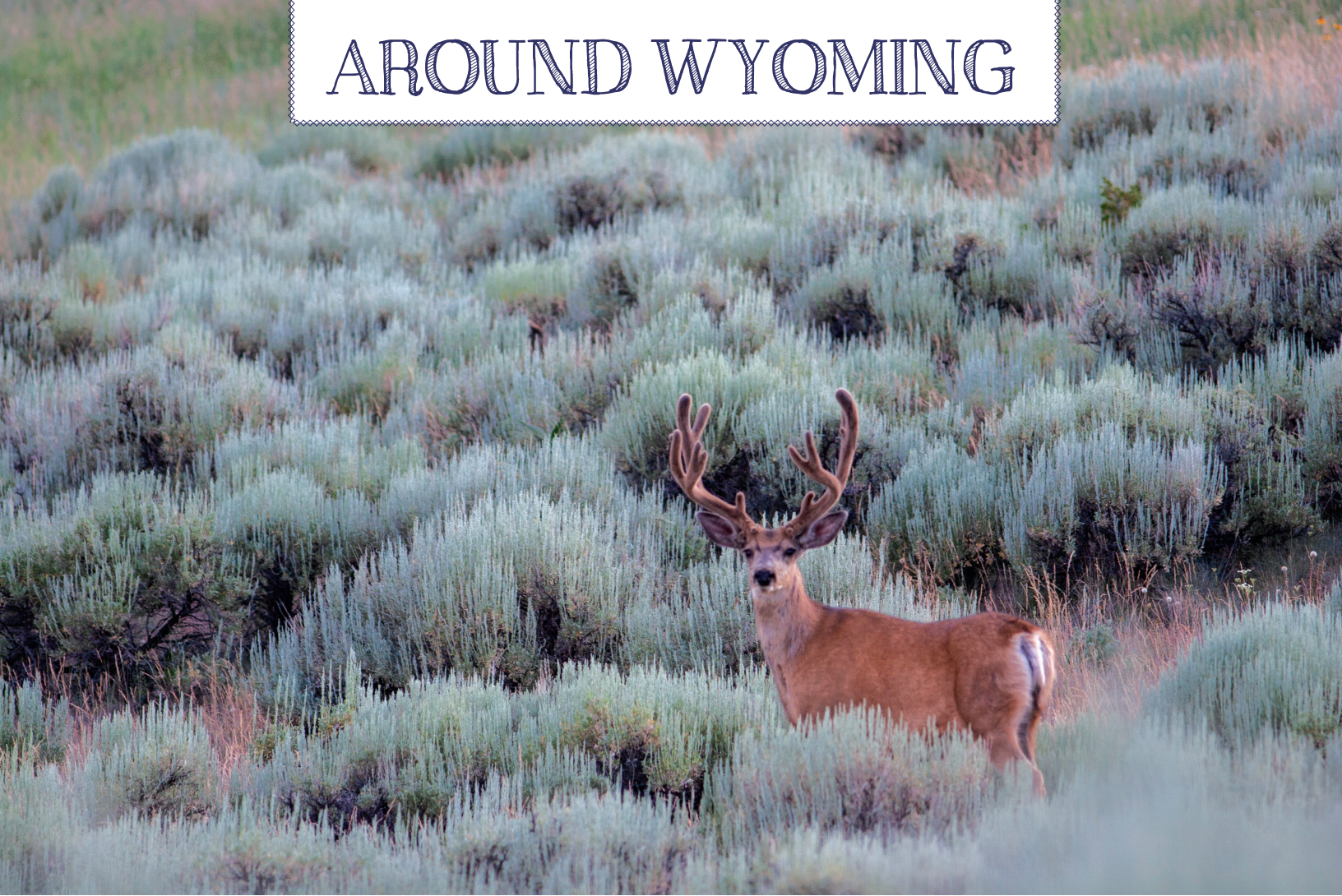
Young: Hoary bats breed in August and then give birth to two pups in May or June. Young remain with the female for a period of about 33-34 days before they begin flights and are weaned. While young are with the mother, they cling to her during the day while she sleeps and hang on twigs or leaves while she hunts for

insects at night.

Predators: Hoary bats are eaten by a number of predators, especially hawks and owls. American kestrels and screech owls sometimes even catch hoary bats while they are flying!

Food: Hoary bats eat a wide variety of insects, especially moths. They have been known to feed occasionally on other prey, including the much smaller eastern pipistrelle, another bat species.

Did you know? Hoary bats are found across Wyoming and are the most widespread bat species in North America. They are highly migratory, moving from northern latitudes in the summer to winter as far south as Central America. Hoary bats are also named for the frosted or “hoary” tips of their fur.



A mule deer enjoys the sagebrush habitat on the Whiskey Basin Wildlife Habitat Management Area. (Photo by Mark Gocke/WGFD)

Wildlife Habitat Management Areas

The Game and Fish manages 38 Wildlife Habitat Management Areas (WHMAs) throughout the state. These lands were purchased with the money that is made through selling hunting and fishing licenses to provide a safe habitat for wildlife to spend their winter.

Many of these WHMAs are closed to human use in the winter and early spring when wildlife are working hard to survive and are the most sensitive to disturbance and stress. During the winter, many animals use up their fat reserves to survive. This means that wildlife need to use the

little bit of energy they have wisely until the late spring when they can begin eating green plants again. If people are in the area, they might accidentally trample plants that wildlife are relying upon for food or frighten the wildlife and cause them to use precious energy running away.

Some of the animals that WHMAs help the most include deer, elk and bighorn sheep, but other wildlife and native plants benefit too. WHMAs also protect the streams and rivers that flow through them, which gives aquatic wildlife like fish and frogs a healthy habitat too.

During the summer and fall, WHMAs provide places for people to fish, hunt, trap, boat, view wildlife, picnic and hike. Camping is allowed in some areas and motor vehicles are allowed on certain roads. Each WHMA has informational signs, which have the specific uses and rules for the area. You and your family can use these wonderful outdoor resources, but please give wintering wildlife a break by respecting the closure dates and other restrictions on WHMAs and big game winter ranges.

OUTDOOR CLASSROOM

Build you own bat house!

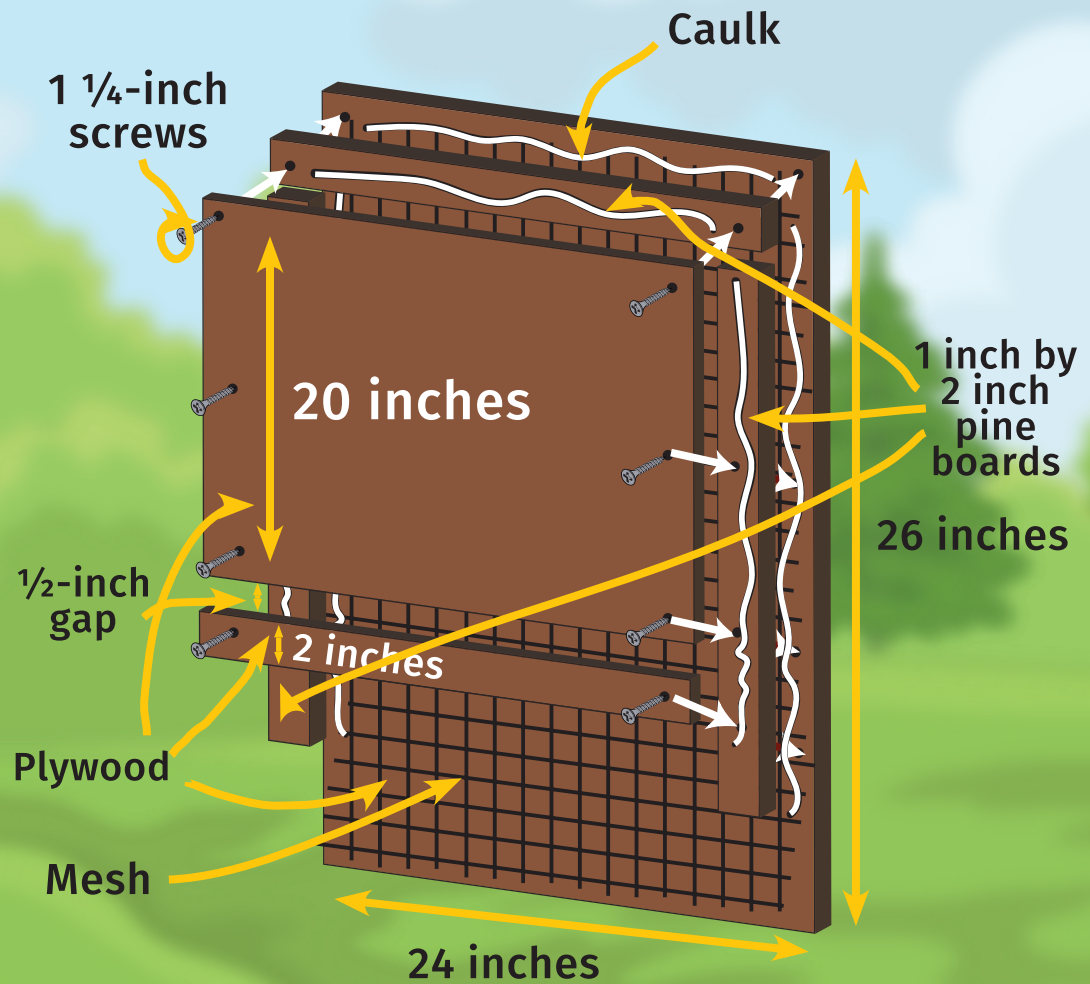
Building a bat house can help you conserve and watch one of Wyoming's most interesting nongame species. It's an easy project you and an adult can do in a day.

What you will need

To start off, you'll want to keep safety in mind at all times when building your own bat house. Kids can help screw, glue, and paint, but let adults do the wood cutting.

Materials

- 1/2-inch plywood:
 - 24x20-inch piece
 - 24x2-inch piece
 - 24x26-inch piece
- 1x2-inch pine board (which actually measures 3/4x1 1/2-inch)
 - two 21-inch pieces
 - 24-inch piece
- Caulk
- 1 1/4-inch screws
- Dark colored stain or paint
- Metal mesh
 - 26"x24" piece



Attract bug-catchers

Wyoming's Little Brown Bat is a very helpful creature to have around. They can catch 600 moths in an hour and thousands of mosquitoes in a single night! Little brown bats roost in between the bark and trunk of trees, however you can promote these natural bug-catchers living around your home by building them a custom bat house where they can roost and raise their young. This bat house mimics space between bark where they like to roost and raise their young. The metal mesh is there to make a rough surface for bats to climb and caulk is added to keep it warm inside. It's painted dark colors (only on the outside) to absorb heat, too.

Steps

Step 1: Paint only the outside faces of the plywood and pine board with dark stain or paint and let it dry. This will also help the house retain heat to keep the bats warm.

Step 2: Place the metal mesh onto the largest piece of plywood, and affix the three pine boards onto the plywood with screws, sandwiching the mesh in between. Be sure to put caulk between the pine and plywood before affixing it to seal any openings from the wind. The mesh provides a rough surface for the bats to grab onto and climb around inside their new house with.

Step 3: Put some caulk onto the top side of the pine

boards, and affix the other two pieces of plywood onto them, being sure to leave a 1/2" gap between the larger piece of plywood that goes above the smaller piece below. (See the image to clarify the assembly.)

Step 4: Mount your finished bat house in a spot that's sunny, ideally 10-15 feet off the ground to protect your bats from predators. The side of a house or a post work well! If your sunny spot is close to a water source for the bats to drink, that's a plus!

Step 5: Wait for some little brown bats to move in and start zipping around and snagging up bugs at night.

TEST YOUR KNOWLEDGE

CROSSWORD PUZZLE

IF YOU AREN'T SURE, LOOK AROUND
IN THIS ISSUE TO FIND THE ANSWER!



CLUES:

Across:

2. Wildlife like bats do this to survive during the winter
4. Game and Fish has WHMAs to help wildlife survive this season
5. This disease is very harmful to bats: White _____ Syndrome

Down:

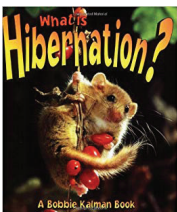
1. This is the most widespread species of bat in North America
3. The big brown bat's favorite type of food
4. Habitat is made up of food, space, shelter and _____

Answers:

Answers: Across- 2. Hibernation; 4. Winter; 5. Nose / Down- 1. Hoary; 3. Beetles; 4. Water

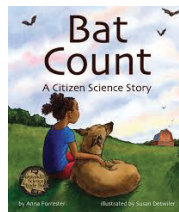
LEARNING LINKS

Books to check out



What is Hibernation?
By Bobbie Kalman and John Crossingham

Why do animals migrate? Which ones hibernate instead? How do animals know when to leave? How long does their journey take? This book answers all these questions and more



Bat Count — A Citizen Science Story
By Anna Forrester

A story that takes readers on a journey to understand the importance of bats in nature.



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